

Appln. No. 09/748,650
Amendment dated August 8, 2005
Reply to Office Action of May 9, 2005

REMARKS/ARGUMENTS

Claim 1 - 10 are in the application for consideration. Reconsideration of the application is requested in view of the amendments made in the application and the statements appearing below herein.

1. The objection to the Abstract of the Disclosure has been overcome by removing the terms "means" and "comprised" and replacing them with acceptable terms.

Applicants' attorney regrets the inadvertent inclusion of the objectionable terms in the amended Abstract submitted in the previous Amendment filed February 11, 2005.

2. The rejection of claims 1 - 8 under the second paragraph of 35 U.S.C. § 112 because the term "said printer" did not have proper antecedent basis has been overcome by the amendment made in claim 1.

Reconsideration of this ground of rejection and withdrawal thereof from the application are respectfully requested.

3. Claims 1 - 3 and 5 - 10 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 5,689,283 ("Shirochi") in view of U.S. Patent 5,949,087 ("Cooper").

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In support of the rejection the examiner has asserted, generally, that Shirochi teaches a method of imaging a digital display having the elements recited in present claims 1 - 3 and 5 - 10 except for the provision of a plurality of lenses and the photosensitive medium defining the image plane. It is further asserted that Cooper teaches an apparatus and method for position and/or resolution enhancing of an image wherein the apparatus can be either a projection display system or a printer and that one of the plural optical elements includes a transposable optics. The examiner has concluded that it would have been obvious to one of ordinary skill in the art to incorporate a plurality of lenses including a transposable lens in the device of Shirochi as taught by Cooper.

Applicants traverse this ground of rejection. The references, viewed individually or in combination, do not teach or suggest the subject matter of claims 1 - 3 and 5 - 10 within the meaning of 35 USC § 103. Present claims 1 - 3 and 5 - 10 are drawn to a method of imaging a digital display onto an image plane and a printer for doing so. The method of the present invention increases the color saturation of a digital printer which utilizes an LCD display.

According to the invention of applicants, a lens is jogged, or transposed, out of the optic axis and the

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image on the LCD array is moved slightly, thus overlaying the three monochromatic (red, green and blue) images thereby increasing the color saturation of the printed image.

Applicants' claimed method and printer increase the color saturation of the image using the same digital area display by displacing the image formed by the display on the film image plane by a small distance.

Step c) of claim 1 recites

transposing ... said transposable lens a fixed distance, said fixed distance being such that each of said pixel images exposed onto said photosensitive medium is shifted by a distance equal to the width of one pixel image

The second transposing step e) recites transposing the lens the same distance.

The references relied upon to support the rejection of claims 1 - 3 and 5 - 10 do not teach or suggest applicants' method and printer within the meaning of 35 USC § 103. Applicants continue to rely on the remarks made with respect to Shirochi in the previous Amendment filed February 11, 2005. Those remarks will not be repeated here for the sake of brevity. It has been shown that Shirochi does not describe a method or a printer for printing using a shifting lens.

The secondary reference, Cooper, does not render the rejection any more effective. Cooper describes a

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technique for stabilizing images in a movie film projection system. In movie film projection systems the film is typically driven by the use of sprocket holes located along both sides of the film. With repeated use the sprocket holes become worn which results in "jitter" (see column 1, line 36 to column 2, line 18). Cooper teaches a corrective technique for canceling mechanical jitter of the film strip. The corrective technique involves a feedback system to stabilize movement of the individual frame by sensing the edges of the frame and positioning the frame to obtain a stable image. The system taught by Cooper transposes a lens a variable amount for each frame to keep each frame appropriately registered.

It is important to recognize that the amount of displacement of the image of each frame in the method of Cooper is dependent upon the extent to which the respective sprocket holes are worn. In effect, in order to achieve the purpose of Cooper, it is necessary to transpose the lens whatever distance is required to keep the particular frame appropriately registered such that unwanted jitter is avoided. In order to do so the lens can not be transposed a fixed distance for each frame since doing so would not necessarily provide the desired result.

The purpose for transposing the lens according to the method of applicants is completely different from that of Cooper. The reference transposes the lens

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whatever variable distance is necessary to avoid jitter whereas in applicants' method the lens is transposed a fixed distance each time to provide increased color saturation of the image. Cooper nowhere teaches or suggests transposing a lens the same fixed distance in each transposing step.

Thus, Cooper, viewed in combination with Shirochi does not teach or suggest applicants' advantageous method and printer. In order to properly support a rejection under 35 USC § 103 a reference, or combination of references, must teach or suggest the claimed subject matter so as to place it in the possession of the general public. Here, applicants' claimed printer and method would not be obvious to those skilled in the art from the disclosures of the references.

Reconsideration of this ground of rejection and withdrawal thereof are respectfully requested.

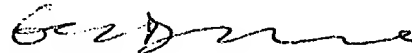
4. Claim 4 has been objected to as being dependent upon a rejected base claim and indicated as containing allowable subject matter. Claim 4 is dependent upon claim 3 which is in turn dependent upon claim 1. Claims 1 and 3 have been shown to be patentably distinct over the references of record. Accordingly, claim 4 is believed to be allowable in its present form.

In summary, claims 1 - 10 are in the application and have been shown to be proper in form for allowance

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and in substance to be directed to a wholly novel and patentable thermal printer apparatus. Reconsideration of the application and allowance of the claims are respectfully requested.

Respectfully submitted,



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